CASTLE RIVER

SUB-REGIONAL

INTEGRATED RESOURCE PLAN

ANNUAL REPORT
1986/1987

December 1987

Alberta

Southern Region,
Regional Resource Management Committee

ANNUAL REPORT
CASTLE RIVER SUB-REGIONAL PLAN

prepared by

Regional Resource Management Committee
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TABLE OF CONTENTS

1. INTRODUCTION..... 1

2. ALBERTA FOREST SERVICE..... 2

2.1 Access Management Plan..... 2
2.2 Reclamation..... 2
2.3 Public Land Administration..... 2
2.4 Range Management..... 3
2.5 Recreation..... 3

3. FISH & WILDLIFE DIVISION..... 4

3.1 Elk Winter Range Enhancement..... 4
3.2 Access Management..... 5
3.3 Habitat Development..... 5
3.4 Stream & Lake Inventories..... 7
3.5 Mountain Goats..... 8

4. PUBLIC LANDS DIVISION..... 9

4.1 Range Inventory, Management & Improvement..... 9
4.2 Access Management..... 9
4.3 Reservations & Land Sales..... 10

5. ONGOING ADMINISTRATIVE & OPERATIONAL ACTIVITIES..... 11

5.1 Introduction..... 11
5.2 Alberta Forest Service..... 11
5.3 Fish & Wildlife Division..... 14
5.4 Public Lands Division..... 16

6. HOUSEKEEPING CHANGES/AMENDMENTS..... 17

1. INTRODUCTION

This document provides an overview of the resource management and development activities that have occurred under the Castle River Sub-Regional Integrated Resource Plan (IRP) from the time of its approval in 1985, until April 1987. Information in this report is current to that date only. Completion of this annual report fulfills one requirement of the approved implementation framework for integrated resource plans.

In summarizing the activities of the involved government agencies, this report follows the same organizational format used in the Regional Resource Management Committee's (RRMC) implementation document for the Castle River IRP.*

In addition to outlining activities that are occurring specifically as a result of the IRP, this report also contains a brief summary of the ongoing operational activities of the involved agencies in the IRP area.

The report focuses on the activities of the three divisions with management and administrative responsibilities in Alberta Forestry, Lands and Wildlife. Other departments were involved in the process of producing the Castle River IRP and will assist in its implementation on a continuing basis. Alberta Tourism has provided ongoing consulting assistance and guidance to the owners of the Westcastle ski area. Otherwise, there has been limited activity by other agencies to date, but their contributions will be noted in future annual reports.

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* Implementation Document -- Castle River Sub-Regional IRP, Southern Region Regional Resource Management Committee, December 1987.

2. ALBERTA FOREST SERVICE

2.1 Access Management Plan

The access management plan commenced with the development of a terms of reference which was approved by the RRMC. An in-depth survey was conducted by representatives from Fish & Wildlife Division, Public Lands Division and the Alberta Forest Service of all existing access in the area. A draft plan is being prepared, scheduled for completion and presentation to all interested publics & agencies for input in the fall of 1987.

Anticipated Activities 1987/88

The draft plan will not be completed by the fall of 1987, thus its development, including public input, will continue in 1987/88 with a revised schedule for completion being the fall of 1988.

2.2 Reclamation

No reclamation programs were carried out at this time pending approval & implementation of the access management plan.

Anticipated Activities 1987/88

No reclamation programs will be initiated in 1987/88 pending completion of access management plan.

2.3 Public Land Administration

Management plans are nearing completion for two of the grazing leases involved on White Area lands identified as having "Multiple Values" in RMA E. The plans identify those portions of a grazing lease primarily suitable for forage production; areas suitable for forest production on a sustained yield basis; and areas critical for the maintenance of wildlife in the area.

Anticipated Activities 1987/88

Six management plans were developed by the Alberta Forest Service and referred to the Public Lands and Fish and Wildlife Divisions. Activities for 1987/88 will be the finalizing of Public Lands and Fish and Wildlife inputs, and negiotiations with lease holders. Plans are to be completed by fall of 1988.

2.4 Range Management

No updating or revision of range management plans occurred for the Castle River, Southend, Mill Creek and Jackson Creek allotments owing to higher priority areas. However, one range improvement plan covering approximately 1100 acres (445 ha) was developed, ready for implementation if and when the funding is available.

Anticipated Activities 1987/88

No new initiatives in 1987/88. A range inventory of cutblocks in Gladstone Creek area is proposed for the summer of 1988.

2.5 Recreation

A variety of recreational opportunities and facilities were provided and maintained over the past year. Unfortunately, because of budget constraints, new construction was limited to 2.5 miles (4 km.) of hiking trail from the Beaver Mines Lake Campground up Table Mountain. A total of 95 auto access camping units were upgraded in the Beaver Mines, Castle River Bridge and Castle River Falls campgrounds. Work included new facilities, reshaping & gravelling some units, landscaping, tree planting and hazardous tree removal, etc.

Anticipated Activities 1987/88

Upgrading of Lynx Creek Recreation Area.

3. FISH & WILDLIFE

3.1 Elk Winter Range Enhancement

Planning activities related to elk winter ranges in the Castle River IRP dealt with the following:

1) Information from annual aerial surveys was used to plot winter range used by the Castle/Carbondale elk herd.

2) Winter ranges were inspected to determine access points and areas suitable for exclosure plots. Enclosure cages were obtained from the Fish and Wildlife Division, Edmonton and the Department of Agriculture.

3) After obtaining permission from landowners or lessees, the exclosure plots were set out and locations mapped.

4) Information was obtained from Alberta Forest Service in Blairmore on range allotments, stocking rates and turnout dates for domestic livestock.

5) Clipping forage in exclosure plots was completed in October 1986. Cages were moved to an adjacent plot to monitor further use of forage over the winter months. The vegetation samples from the exclosure plots currently are being dried and weighed. The objectives of the Castle/Carbondale range inventory are as follows:

Overall Objective:

To collect baseline information on winter range used by the Castle/Carbondale elk herd to develop an elk management plan.

Sub-Objectives:

1) Land status

- map public vs. private lands within the study area.
- inventory & map grazing allotments, grazing management plans, turnout dates and stocking rates from Alberta Forest Service and Public Lands Division files.

2) Factors influencing elk use of winter range

- snow depth on and off winter range.
- effect of chinooks.
- impact of hunting and winter recreation.

3) Conditions of winter range used by elk

- by the use of exclosure plots, the amount of forage used by domestic livestock and elk will be determined on a number of sites on, and adjacent to, wintering areas.

4) Habitat improvement

- determine the use of recently logged areas (damaged by mountain pine beetle) by elk, moose and deer during the winter. Use will be determined by aerial surveys that will require an expansion of the 1986/87 elk survey. This could not be accommodated during the aerial survey program.

5) Beauvais Lake

- in addition to the above work for the Castle/Carbondale elk range, an evaluation of land status in the Beauvais Lake area will be made to determine whether any alternatives for habitat improvement for this elk herd are available.

Anticipated Activities 1987/88

Monitoring of the Castle/Carbondale River elk herd winter range conditions.

3.2 Access Management

Fish and Wildlife Division staff participated in access management planning coordinated by the Alberta Forest Service. Terms of reference were prepared and access routes were field assessed.

Anticipated Activities 1987/88

Continuation of involvement in access management planning.

3.3 Habitat Development

Non-Government Organizations

Shell Canada Ltd. provided and installed several round bales to provide goose nesting habitat in wetlands on their property near their Waterton gas plant.

Shell Canada Ltd. installed several instream devices on Pincher Creek to improve trout habitat. These included two upstream V-deflectors, one boulder and tree revetment and willow plantings.

The Willow Valley Trophy Club and Coleman Fish and Game Club completed a bighorn sheep range enhancement program with funding from the Buck for Wildlife program. This project included aspen clearing, controlled burning of a grassland area, and seeding and fertilizing a bare slope.

The Oldman Chapter of Trout Unlimited conducted a streambank fencing project on Beaver Mines Creek.

Fish and Wildlife Division

A consultant was retained to provide preliminary designs for the development of a trout fishery in Prairie Bluff Lake, which currently has very limited overwintering capabilities.

A consultant was retained to prepare preliminary designs for the development of a trout fishery on Beaverdam Lake, which currently has very limited overwintering capabilities.

An assessment was completed of the requirements for an outlet structure for stabilization of Ruby Lake.

A shoreline stabilization program was prepared by Alberta Environment for Beauvais Lake. Included in the project was a new outlet structure and three fishing nodes to increase shoreline fishing opportunities. Work began in November 1986, but was subsequently stopped because of budget cutbacks.

Mitigation by Industry

Under supervision by Fish & Wildlife Division habitat staff, Shell Canada Ltd. installed instream habitat devices in five streams to reduce the impact of two pipeline projects and an old stream channelization. Habitat devices installed on Pincher, Whitney, Mill, Gladstone and Beaver Mines creeks included 15 upstream V-deflectors, eight rock sills, four log sills, six boulder clusters, five rock spurs, four rock deflectors, five log deflectors and one tree revetment.

Shell Canada Ltd. constructed 395 feet (120 m) of new stream channel on South Drywood Creek in order to by-pass a wellsite located within the old channel. Included in this mitigation project were two upstream V-deflectors, two rock sills and one experimental rock/log sill.

A private landowner created a channel in a section of Spionkop Creek to provide flood control. Mitigation rock spurs and boulder clusters were installed in this portion of the creek.

In order to mitigate the effects of increased water withdrawal from North Drywood Creek, Shell Canada Ltd. funded an instream habitat improvement program on the creek. Work included installation of boulder sills for pool development, channel consolidation and log crib walls for bank protection.

Anticipated Activities 1987/88

Planning and implementation of habitat development/enhancement projects (e.g., Prairie Bluff Lake stabilization, Ruby Lake stabilization)

3.4 Stream and Lake Inventories

Beauvais Lake was sample netted to determine the success of brown trout introduced in 1985. This species is now well established in the lake and are starting to be caught by anglers in increasing numbers despite their relatively slow growth. Brown trout and rainbow trout stocking will continue in 1987. No further inventory work is planned in 1987.

Mami Lake is scheduled to be sample netted in 1987 to determine the relative abundance of trout and suckers, plus the trout age, and growth and feeding patterns. A request has been submitted to change the stocking rate and size of rainbows planted in this lake in 1988 (from 300,000 3-4 in. [5-10 cm] fish to 150,000 4-6 in. [10-15 cm] fish). Fish & Wildlife plans to follow the effects of this change with creel and test netting programs in subsequent years. If summer STEP or wage money is not available, it is possible that the test netting of Mami Lake will be deleted.

High Mountain Lakes

1) Prairie Bluff Lake was sample netted to determine the success of an experimental 1985 brook trout planting. No fish were caught. This lake requires major renovations to make it suitable to sustain fish life.

2) Bovin (Blue) Lake was sample netted to assess the brook trout population following reports of a large summer die-off in 1985. Five brook trout were caught, indicating that die-off was not complete, but the trout population was low.

Fish population work is planned for Barnaby and Southfork lakes in 1987.

Anticipated Activities 1987/88

- Fisheries management work on Barnaby/Upper and Lower Southfork lakes, Mami (Paine) Lake.

- Assessment of sportfishing regulation changes on the West Castle River.

- Collection of creel survey information on lakes and streams in the planning area.

3.5 Mountain Goats

Activities included an aerial survey (with the B.C. Fish and Wildlife Branch) of the mountain goat population along the Continental Divide south of Highway 3. A total of 167 goats (117 adults, 33 kids and 18 yearlings) were observed. One hundred and seven were on the eastern side of the Continental Divide. In addition to the aerial inventory, ground inspections of known use areas were conducted to complement results of the aerial survey. The survey will be repeated again in 1989.

Based on the 1986 aerial survey results and those of preceeding surveys, the mountain area between Waterton Park and Highway 3 was divided into four mountain goat management areas. For the first time since the 1960's, three of these management areas were opened to hunting; only eight licences were issued. Hunter success was high with all eight hunters taking a goat. Public reaction to reopening the season was minimal.

Anticipated Activities 1987/88

Monitoring of mountain goat populations.

4. PUBLIC LANDS

4.1 Range Inventory, Management & Improvement

Approximately 14,353 acres (5,810 ha) of grazing lease land was inventoried in the White Area of the Castle River IRP in 1986. Consultants supervised by Public Lands staff completed the inventory. Data indicated that less than 25% of the lands in this area were open grasslands. The remainder has tree and brush cover on it. The grasslands providing most of the livestock grazing are in unsatisfactory condition, with the vast majority producing less than one half or one quarter of site potential.

Inventory data will be used to develop range management plans on grazing lease lands within the White Area. Public Lands Division staff will work with the lessees to promote better management. Potential exists on every lease to implement better range management and gradually achieve sustainable grazing systems. A variety of management strategies will be selectively used including crossfencing, refinement of grazing systems, consolidated pasture development, deferred rotational grazing and development of spring-use pastures.

In terms of range improvement, approximately 170 acres (69 ha) of forest cover was approved for clearing in 1986, but was placed on hold owing to departmental budget constraints. Approximately 410 acres (166 ha) of range improvement is underway at various stages of completion under the direct and indirect range improvement programs. Most of the latter projects were approved before Cabinet approval of the Castle River IRP.

Anticipated Activities 1987/88

- Implementation of range inventories to refine management on grazing lease and permits scheduled for renewal or periodic inspections.

- Co-operation with lessees on range improvement projects initiated by grazing disposition holders.

4.2 Access Management

The access management plan was initiated in the Green Area in 1986. The field work was completed and transfered onto forest land use maps in April 1987. The Public Lands Division will transpose trails and roads on the map in the White Area in 1987.

Departmental legal advice states that a lessee is in possession of real property and can control access on that property. This may cause some problems with leases affected by designated access routes. It may be necessary to exclude required access routes from some leases. Public Lands Division will co-ordinate its planning with the work done by the Alberta Forest Service and Fish & Wildlife Division.

Anticipated Activities 1987/88

Work on the access management plan will be co-ordinated with efforts of the Alberta Forest Service and Fish and Wildlife Division in the Forest Reserve.

4.3 Reservations and Land Sales

The lands identified in RMA E as "White Area Lands With Multiple Values" have had a reservation placed against them. White Area lands in the IRP area were not designated as suitable for sale for agricultural purposes. There is little interest in land purchase for agriculture in this area.

Anticipated Activities 1987/88

- Place a special reservation on the 45 quarters of land in the White Area identified in the plan.

- On grazing dispositions affected by timber removal: develop a reforestation/grazing development plan in co-operation with the Alberta Forest Service, the lessee, and Public Lands Division.

5. ONGOING ADMINISTRATIVE & OPERATIONAL ACTIVITIES

5.1 Introduction

Day-to-day administrative and management activity often takes place that is not specifically related to the Castle River IRP. The IRP, nevertheless, constitutes the framework within which all this activity takes place and in some cases -- such as the review of disposition applications and other referrals -- the link with the IRP may be quite explicit. Accordingly, a summary of ongoing divisional operation activities is included below.

5.2 Alberta Forest Service

Number And Type of Forest Land Use Referrals

8 - MSL (Mineral Surface Lease)
1 - LOC (License of Occupation)
5 - PLA (Pipeline Agreements)
9 - PLA (Renewals)
3 - GEO (Geophysical Programs)
2 - Commercial Trail Riding Permits
1 - REC (Recreational Lease)
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29 Total Referrals

Recreation

Recreation use was considered normal over the past year, with heavy overuse occurring on long weekends. Beaver Mines Lake was the most popular campground, with 12,902 parties using the facilities between May and September 1986 for an estimated total of 41,286 visitors. An estimated 4,361 visitors used the day use facilities provided at Beaver Mine between May and September 1986.

Both the Castle Falls and Lynx Creek campgrounds were upgraded in the early part of 1986 and as a result, use levels increased over 1985 levels at both sites -- almost doubling in the case of Lynx Creek. Use levels increased approximately 20% at the Castle River campground. Collectively, the three forest recreation areas were used by 8,244 overnight parties and 381 day use parties in 1986, for an estimated total visitor count of 27,462 people. The vast majority of this use occurred during the peak summer months.

Random camping was also extensive in the planning area, with 715 visitor units being recorded. Surveys were not taken regularly and those completed reflect only a partial count.

Between May and September, the group camp facilities were used 67% of the time.

Snowmobile and cross country ski use in the planning area was normal during the 1986/87 winter season.

Grazing

Thirty-three grazing permits were issued, authorizing 4,135 animal unit months of grazing.

Watershed

Water sampling of the South Castle River and Gladstone Creek continued, and a sampling program was started on Goat Creek. Assessments of the effects of logging on Gladstone Creek were continued with no negative results determined. A computer program to record all water samples data was developed.

All reclamation work previously carried out in the planning area was inventoried to determine effectiveness; it was generally found to be satisfactory.

Eight industrial bridges in the Lost Creek drainage were removed by industry for safety reasons.

Forest Protection

Owing to a near total collapse of insect populations, the mountain pine beetle outbreak is now considered endemic. Monitoring will continue as part of the forest protection program.

Only six forest fires occurred in the planning area, three being man-caused and three started by lightning. A total of <0.5 acres (0.2 ha) were burned.

A labour crew continued clean-up of trees killed by mountain pine beetle along access road in the area. The wood was cut for use in the campground and day use areas.

Timber Management

A Douglas fir genetic site was cleared near the Castle Ranger Station and plantings also occurred in the white spruce providence trial site.

Timber cruising occured at the Byron Creek area, and a miscellaneous timber permit was established for the area.

Eighteen local timber permits were issued for a total of 779 m3.

The Goat Creek area was cruised and proposed second cuts reviewed by Fish & Wildlife. There has been final agreement on a specific cutblock location.

All beetle salvage operations were completed.

Reforestation

The following Silviculture took place in the planning area:

	Blocks	Total Area (ha)	
Regen Surveys	74	1253.1	
Walk through Regen	67	849.1	
Free to Grow	18	501.7	
Site Preparation (XM)	7	45.2	
Planting (BR +C)	32	352.5	347,313 trees
Seeding - Aerial	14	145.2	
Total	212	3146.8	

A study of the relationship between soils and the different vegetation communities was done with the goal of improving reforestation success based on soil and silviculture treatments.

Major Contingencies

Shell Jutland Well - The Energy Resources Conservation Board held public hearings in January 1986 in Pincher Creek. Alberta Forest Service personnel attended as observers. Alberta Forest Service was represented on an ad hoc committee formed to address and closely monitor operating conditions. Following disappointing results from a nearby well in B.C., Shell decided not to drill the Jutland well.

Shell Prairie Bluff Wells - The Alberta Forest Service assisted in determining possible access routes and wellsite locations for three proposed wells in Zone 1 on top of Prairie Bluff Mountain.

5.3 Fish & Wildlife

Number and Type of Land Use Referrals

8	MSL (Mineral Surface Lease)
6	LOC (Licence of Occupation)
1	PLA (Pipeline Agreement)
1	DRS (Disposition Reservation)
1	Water Resources Referral
2	Surface Materials Referrals
4	Geophysical Referrals
1	Miscellaneous Lease
1	CTL (Commercial Timber Licence)
1	Development and Reclamation Referral
26	Total Referrals

Elk Population Inventory

A census was taken of the Castle/Carbondale elk population during the winter of 1986/87. Elk were found to be scattered in small groups as a result of open winter conditions, but in most cases were occupying traditional winter range. Approximately 560 elk were observed in the Castle/Carbondale area, down slightly from the winter count of approximately 600 elk in 1984/85.

Fisheries Surveys

Creel data were collected whenever possible by Fish and Wildlife Division officers and biological, staff and personnel from the Department of Recreation & Parks. The following table summarizes the data collected in 1986:

1) Creel survey data were collected from three important lakes in the Castle River IRP area. The data is summarized below:

LAKE	NO. OF CENSUS DAYS	NO. OF ANGLERS INTERVIEWED	TOTAL HOURS FISHING	TOTAL RB TROUT CAUGHT	C.U.E. (Fish/ hour)*
Beauvais Lake	24	312	677	220	0.32
Mami Lake	24	271	762	65	0.08
Beaver Mines Lake	33	425	1059	766	0.72

* Catch per Unit Effort

2) Streams

Creel data were collected by Fish and Wildlife Division officers from a number of streams in the Castle River IRP area: Carbondale, Castle, Lost, South Lost, North Lost and Lynx creeks. A total of 55 anglers were interviewed; they caught 77 cuthroat and three rainbow trout.

3) High Mountain Lakes

Volunteer creel boxes were set up at Rainy Ride Lake and on the trail to Barnaby, Upper and Lower Southfork lakes in 1986. A helicopter was used to carry out the installation and maintenance of these stations. The result of these creel surveys was as follows: 50 anglers from Rainy Ridge reported catching eight golden trout for 73 hours of effort (0.01 trout/hr.), and 97 anglers from Barnaby/Southfork lakes reported catching 32 golden trout (27 from Lower Southfork) in 515 hours of effort (0.06 fish/hr.). Compared to previous years, the angler catch and success rate is down, but angler pressure has increased. Collection of creel data will continue in 1987 as the opportunity arises. The high mountain creel boxes will be used again in 1987, with possibly another location added.

Number and Type of Wildlife Support Occurrences

09	Beaver
15	Bear
16	Ungulate
01	Waterfowl
00	Wolf
11	Other
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52	Total

Major Contingencies

Shell Jutland Well: Energy Resources Conservation Board public hearings were held. Fish and Wildlife Division personnel attended as observers. The Division also was represented on an ad hoc committee which was formed to address operational concerns. Following disappointing results from a nearby well in B.C., Shell decided not to drill the Jutland Well.

Shell Prairie Bluff Wells: Operational planning was conducted to assess access routes and locations for three wells in Zone 1 on top of Prairie Bluff Mountain. Shell initiated formation of a committee to address wildlife concerns, with representation from Shell, the Fish and Wildlife Division, the Alberta Fish and Game Association, and the Alberta Wilderness Association. Shell hired a consultant to assess winter use by bighorn sheep of the Prairie Bluff complex.

5.4 Public Lands

Number and Type of Land Use Referrals

2	- Grazing lease/permit applications
4	- Grazing lease conversion applications
7	- Grazing lease renewal applications
7	- Grazing lease/permit periodic inspection
7	- Range improvement projects
4	- Miscellaneous lease applications
1	- Recreation lease application
1	- Private land sale application
2	- Mineral surface lease applications
2	- Pipeline agreements
4	- License of occupation
1	- Easement
1	- Geophysical application
--	
43	Total Referrals

6. HOUSEKEEPING CHANGES/AMENDMENTS

There have been no housekeeping changes or amendments to the Castle River IRP.

As part of the process of revising A Coal Development Policy for Alberta, however, extensive discussions have been held between the Coal Association of Canada, the Energy Resources Conservation Board and agencies of the provincial government. It is likely that these discussions will result in new direction to the integrated resource planning program on how coal exploration and development should be addressed in IRPs. This may result in requests for changes to approved IRPs.

Any action on this item after April 1987 will be reported fully in next years's annual report.